UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF

DM-7J

July 29, 2005

RE: Corrective Action
Keystone Steel & Wire site
Peoria, Illinois
ILD 000 714 881

Dear Interested Party:

On July 29, 2005, in the Peoria Journal Star Newspaper, the U.S. Environmental Protection Agency (U.S. EPA) announced corrective action proposed in accordance to the U.S. EPA's Resource Conservation and Recovery Act (RCRA)at the Keystone Steel & Wire site in Peoria, Illinois.

Enclosed is a copy of the Public Notice and Statement of Basis providing additional information on the corrective action being performed. These same records are available for public inspection at the Peoria Public Library, 107 NE Monroe Street, Peoria, IL and at the Alpha Park Public Library, 3527 South Airport Road, Bartonville, IL. Documents are also available at the U.S. EPA located at 77 West Jackson Boulevard, Chicago, Illinois. Files at the U.S. EPA may be reviewed between 8:30 a.m. and 4:00 p.m., Monday through Friday in the 7th floor Record Center.

The U.S. EPA is seeking public comment on the proposed corrective action. Comments must be received by September 16, 2005, and should be sent to the following address:

U.S. EPA, Region 5
77 West Jackson Boulevard DE-9J
Chicago, Illinois 60604-3590
Attn: Jonathan Adenuga
adenuga.jonathan@epa.gov

The U.S. EPA will consider all comments received during the public comment period prior to making its final decision. Each person who submitted written comments or requested notice of the decision will receive notice of the final decision. At the time of the final decision, the U.S. EPA will respond to all significant comments. No Hearing is scheduled at this time.

If you have any questions pertaining to this matter, please contact Jonathan Adenuga (312) 886-7954.

Sincerely

Terri J. Rancher, EPS
Information Management Section
Waste Pesticides and Toxics Division
U.S. EPA, Region 5

Enclosures

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF
DM-7J

July 29, 2005

7099 3400 0000 9585 1815

Mr. Jason Zimmerman
Alpha Park Public Library
3527 South Airport Road
Bartonville, Illinois 61607

Re: Proposed Corrective Action
Keystone Steel & Wire site
ILD 000 714 881

Dear Mr. Zimmerman:

Thank you for accepting the enclosed records and agreeing to make them available for the public to view during the comment period scheduled from **August 1 - September 16, 2005.**

Enclosed, please find the following documents:

- ☞ Statement of Basis
- ☞ Public Notice

There is no need to return these documents at the close of the public examination period.

An ad will be placed in the Peoria Journal Star and an announcement will be made on local radio stations on Friday, July 29, 2005, which will commence a 45-day comment period.

Thank you for your assistance. If you have any question, please contact me at (312) 886-4188.

Sincerely yours,

Terri J. Rancher, EPS
Information Management Section
Waste, Pesticides and Toxics Division

Enclosures

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF
DM-7J

July 29, 2005

7099 3400 0000 9585 1846

Mr. Joe Fitzanko
Peoria Public Library
107 NE Monroe Street
Peoria, Illinois 61602

Re: Proposed Corrective Action
Keystone Steel & Wire site
ILD 000 714 881

Dear Mr. Fitzanko:

Thank you for accepting the enclosed records and agreeing to make them available for the public to view during the comment period scheduled from **August 1 - September 16, 2005.**

Enclosed, please find the following documents:

- ☞ Statement of Basis
- ☞ Public Notice

There is no need to return these documents at the close of the public examination period.

An ad will be placed in the Peoria Journal Star and an announcement will be made on local radio stations on Friday, July 29, 2005, which will commence a 45-day comment period.

Thank you for your assistance. If you have any question, please contact me at (312) 886-4188.

Sincerely yours,

Terri J. Rancher, EPS
Information Management Section
Waste, Pesticides and Toxics Division

Enclosures

STATEMENT OF BASIS

for

Keystone Steel and Wire Company
EPA ID NO. ILD 000 714 881
Peoria, Illinois

July 2005

Keystone Steel and Wire Company
Peoria, Illinois

INTRODUCTION

This Statement of Basis (SB) for Keystone Steel and Wire Company (KS&W) explains the proposed remedy for the collection, treatment and removal of hazardous waste from an onsite pond (F-Pond) and the North Ditch Staging Area at the facility in Peoria, Illinois. In addition, the SB includes summaries of all corrective measure alternatives analyzed by KS&W. U.S. EPA will select a final remedy for the facility only after the public comment period has ended and the information provided by the public during this period has been reviewed and substantive comments considered.

The U.S. EPA is issuing this SB as part of its public participation responsibilities under the Resource Conservation and Recovery Act (RCRA). The document summarizes information that can be found in greater detail in the February 2001 Current Conditions Report and the January 2002 Environmental Indicators (EI) Determination Report and other pertinent documents contained in the Administrative Record for this facility. U.S. EPA encourages the public to review these documents in order to gain a more comprehensive understanding of the facility and the RCRA activities that have been conducted. The public can be involved in the remedy selection process by reviewing the documents contained in the Administrative Record.

U.S. EPA may modify the proposed remedy or select another remedy based on new information or public comments. Therefore, the public is encouraged to review and comment on **all** alternatives.

PROPOSED REMEDY

The U.S. EPA is proposing the following remedy to address all contamination at the **F-Pond:**

1) Dewatering of the F-Pond; 2) identification of characteristically hazardous soils/sediments; 3) in-situ treatment of characteristically hazardous soils/sediments, if present, to render the soils/sediments non-hazardous, when generated; 4) excavation of the treated and impacted soils/sediments to achieve the remediation goals; 5) off-site disposal of the excavated soils/sediments as non-hazardous waste at a Subtitle D disposal facility; 6) deed restriction on the F-Pond to limit future use of the unit to commercial/industrial

purposes; and 7)implementation of a groundwater monitoring system to demonstrate no impact to the underlying groundwater.

The U.S. EPA is proposing the following remedy to address all contamination at the **North Ditch Staging Area**:

1) Identification of characteristically hazardous soils; 2) excavation and treatment of characteristically hazardous soils, if present, within a designated storage/treatment Corrective Action Management Unit (CAMU) to render the soil non-hazardous and meet the applicable land disposal restrictions (LDR); 3) excavation of impacted soils to achieve the remediation goals; 4) off-site disposal of the excavated and treated soils as non-hazardous waste at a Subtitle D disposal facility; 5) deed restriction on the North Ditch Staging Area to limit future use of the unit to commercial/industrial purposes; and 6)implementation of a groundwater monitoring system to demonstrate no impact to the underlying groundwater. The components of this alternative are further described below.

The U.S. EPA considers corrective action for groundwater to be complete when all releases to groundwater, including releases from Solid Waste Management Units (SWMUs), have been remediated. Groundwater cleanup objectives include three components: groundwater cleanup levels, point of compliance, and remediation time frames. Point of compliance for corrective action should be throughout the area where groundwater is contaminated above cleanup levels, or, when waste is left in place, at and beyond the boundary of the waste. U.S. EPA refers to this point of compliance as the "throughout-the plume/unit boundary" point of compliance. Therefore, for the current groundwater contamination, U.S. EPA proposes that KS&W continue to operate the ongoing pump and treat system to meet the concentration levels set by the IEPA in the Groundwater management zone (GMZ). For the F-Pond and the North Ditch Staging Area, U.S. EPA is proposing that KS&W also implement a one-time groundwater sampling and analysis program to demonstrate that there are no impacts to groundwater from the F-Pond and North Ditch Staging Area. All hazardous constituents reported in these two units will be analyzed in all groundwater samples collected from the monitoring wells to be installed at these units. A more detailed discussion of the proposed remedy is included below.

The U.S. EPA is also proposing that KS&W must demonstrate that adequate funds will be available to complete the construction as well as the operation and maintenance of the proposed remedy. KS&W must provide this financial assurance within 90 days after U.S. EPA selects the remedy and issues its *Final Decision and*

Response to Comments. Any of the following financial mechanisms may be used to make this demonstration: financial trusts, surety bonds, letters of credit, insurance, or qualification as a self-insurer by means of a financial test. KS&W may request that the amount of the financial assurance be reduced substantially after successfully completing the construction, and again from time to time during the operation and maintenance phase of the remedy.

FACILITY BACKGROUND

The site is located at 7000 South Adams Street, Peoria, Illinois. The facility is just east of U.S. Route 24, south the intersection of Routes 24 and 474, and about one mile west of the Illinois River. The facility manufactures iron and steel including semi-finished and finished wire products. The facility occupies about 1,410 acres and has operated since around 1900.

Soil and groundwater in several areas at the facility are contaminated at levels above appropriately protective risk-based standards. The risk based standards used for this determination are the U.S. EPA Region 9 Preliminary Remediation Goals (PRGs) or the Illinois risk-based remediation objectives. Most of these contaminated areas at the facility are units undergoing closure in compliance with a 1993 Consent Order issued by the Illinois Environmental Protection Agency (IEPA) to KS&W. Corrective action and closure of a majority of these areas has been done under the supervision of the IEPA. These areas include the following: a) South Ditch, b) South Borrow Area Waste Pile, c) Lower South Ditch, d) Soil Stained Area, e) North Ditch, f) Surface Drainage Ditch Area, g), h) Mid Mill Ditch, and i) North and South Dredged Pile.

In 1994, a (GMZ) was approved by IEPA under the 1993 Consent Order to control and begin remediation of a plume of contaminated groundwater that extends under most of the Mid Mill portion of the facility. The groundwater plume is controlled and remediated via a groundwater pump and treat system consisting of four purge wells and an air stripper tower. The plume contains 1,4-dioxane, 1,1-dichcloroethane, 1,1-dichloroethene, trans-1,2-DCE, cis-1,2-DCE, terachloroethene, trichloroethylene, trichloroethene and vinyl chloride. Total volatiles concentrations throughout the GMZ have already been reduced to below one part per million and the action of the pump and treat system continues to reduce the area and extent of the plume.

In December 19, 2000, the U.S. EPA issued an Administrative Order on Consent (AOC) to KS&W compelling KS&W to identify the nature

and extent of any releases of hazardous waste or hazardous constituents from five Solid Waste Management Units (SWMUs) at the facility: a) the Sheen Pond; b) the F-pond; c) the Tail Track Landfill; d) the pond east of the Tail Track Landfill; and e) the Oil Skimming Basin. KS&W was required to submit an Environmental Indicators (EI) report demonstrating that KS&W has contained all current human exposure to contamination and has stabilized the migration of contaminated groundwater at or from the facility including the SWMUs mentioned above. The AOC also required that KS&W submit to U.S. EPA for review final corrective measure proposals for the five SWMUs by January 2003. The AOC requires KS&W to complete all final correctives measures within a reasonable period to protect human health and the environment.

CORRECTIVE MEASURES IMPLEMENTED

KS&W has continued making progress towards the closure of several units since the end of 2000. KS&W has demonstrated clean closure for the following units at the facility: a) the North Ditch; b) the Mid Mill Ditch; c) the Surface Drainage Ditch; and d) the North and South Dredged Pile. To address the remaining areas subject to closure under the IEPA Order, KS&W continues to investigate and submit closure and remedial proposals to the IEPA. Remedial action plans for the South Ditch, South Borrow Area and the Lower South Ditch were approved by the IEPA in November 2002. The current deadline for completing the remedial actions at these three Units is December 31, 2005.

Based on on the January 29, 2002 EI Assessment Report, KS&W has also continued the operation of the groundwater purge wells and the air stripper tower to control and remediate the plume of contaminated groundwater at the facility. Operations have resulted in a significant reduction in the GMZ area and significant reductions in overall containment concentrations throughout the plume. Chlorinated compounds such as TCE, 1,1,1,-TCA, vinyl chloride, 1,2-DCE, trans-1,2 have been detected in deep aquifer at the facility in varying concentrations. For example, 1,1,1-trichloroethane concentrations range from 25 ppb to 205 ppb, well above the recommended PRG of 5.4 ppb; trichloroethylene concentrations range from 65 ppb to 530 ppb, well above the PRG of 1.6 ppb. As of November of 2001, monitoring events indicate that the pump and treat method of remediation currently ongoing at the site has reduced the concentrations of total volatile concentrations throughout the plume to below 1 ppm. The plume circumference has been drastically reduced and contained within the facility boundary. No offsite migration of contaminated groundwater has ever been reported.

Also based on the EI Assessment Report, KS&W investigated four other areas originally not identified in the December 2000 AOC: the North Ditch Staging Area, the East Sludge Pond and the East West Pond; the Slag Processing Area; and the North and South Sludge Lagoons. Excluding the North Ditch Staging Area, the U.S. EPA concluded from these additional investigations that no further actions are warranted in the North and South Sludge Lagoons and the East Sludge Pond and the East West Pond.

SUMMARY OF FACILITY RISKS

Based on the results of the 2001 surface water samples collected from the F-Pond, iron and manganese were detected at 29 ppb and 47 ppb above the federal drinking water standard of 15ppb. TCE was also detected in one sample at 2 ppb. In the sediment samples collected from F-Pond, lead and iron were detected at concentrations above the industrial PRGs. Iron concentrations in the sediments range from 21,000 mg/kg to 140,000 mg/kg and lead concentrations range from 210mg/kg to 3,100 mg/kg. The results of the 1996 and 2002 sampling events at the North Ditch Staging Area also confirmed the presence of elevated lead in soils. Based on TCLP results, concentrations of lead in soils range from non-detect to 22 mg/kg and total concentrations for lead range from 380 mg/kg to 12,000 mg/kg. The levels of lead and iron contamination are above appropriately protective risk-based standards. The risk based standards used for this determination are the U.S. EPA Region 9 Preliminary Remediation Goals (PRGs) or the Illinois risk-based remediation Objectives.

The goals of the selected remedy are to eliminate significant exposures that pose threats to human health and the environment, to clean up contaminated soils to levels consistent with current land use, to restore ground water to its maximum beneficial use, and to eliminate risks to human health by meeting the applicable health-based ground water protection standards. The proposed Remedy selection was based on the assumption that future use of the site will be industrial/commercial, consistent with the current property use. Each of the constituents detected at the site was retained as Potential Constituents of Concern (PCOCs) in groundwater, sediments and surface water. Since the F-Pond may be designated as a wetland, it is assumed that the excavated portion of the F-Pond will not be backfilled with clean fill, but may be restored in accordance with the requirements of Nationwide Permit 38 as approved by the U.S. Army Corps of Engineers.

The site-specific corrective action objectives utilize an exposure prevention approach which either allows removal of waste

materials, activity restrictions or construction of engineered controls to prevent contact.

SUMMARY OF CORRECTIVE MEASURE ALTERNATIVES

The reasonable alternatives for addressing contamination at the KS&W facility are presented below.

Soil and Structures:
Access Restrictions
Deed Restrictions
In-situ Treatment/Off-site Disposal

Groundwater:
Groundwater Pump and Treat System
Alternate Water Supply
Groundwater Monitoring

All of the above alternatives were evaluated during the Corrective Measures Study. Based on the evaluation of these alternatives, the Corrective Measures Alternatives described below were proposed by KS&W for addressing contamination at the facility.

KS&W'S PROPOSED CORRECTIVE MEASURES ALTERNATIVES FOR ADDRESSING CONTAMINATION AT THE FACILITY

Several corrective measures alternatives were considered for the F-Pond and the North Ditch Staging Area during the development of this corrective measures study. The alternatives were developed based on RCRA's threshold screening criteria. Those criteria are as follows:

- Protecting human health and the environment;
- Attaining the applicable media cleanup standards; and
- Controlling the sources of the releases.

The alternatives considered for the F-Pond and North Ditch Staging Area that meet these criteria are described in the following sections. These proposed corrective measures are intended to address risks to human health and the environment under commercial/industrial land use scenarios.

F-Pond

Keystone has considered the following options for the remediation of lead and iron-impacted soils/sediments at the F-Pond.

Alternative No. 1: No Action

Alternative No. 1 consists of no action. Under this alternative, no remedial action or institutional controls will be implemented.

Alternative No. 2: In-situ Treatment/Off-site Disposal

Alternative No. 2 consists of the: 1) dewatering of the F-Pond; 2) identification of characteristically hazardous soils/sediments; 3) in-situ treatment of characteristically hazardous soils/sediments, if present, to render the soils/sediments non-hazardous, when generated; 4) excavation of the treated and impacted soils/sediments to achieve the remediation goals; 5) off-site disposal of the excavated soils/sediments as non-hazardous waste at a Subtitle D disposal facility; and 6) deed restriction of the F-Pond to limit future use of the unit to commercial/industrial purposes. The components of this alternative are further described as follows:

- Surface water present in the F-Pond will be sampled to determine the nature and concentration of the contaminants of concern identified during previous investigations, i.e. lead, iron, manganese, and trichloroethylene (TCE). Based on these results, the surface water will be transferred directly to the facility's wastewater treatment plant (WWTP) for treatment, if needed, and discharge under the facility's industrial discharge permit. This discharge will be conducted by KS&W in compliance with the limits established in the NPDES industrial discharge permit.

- Samples will be collected from the F-Pond soil/sediment for laboratory analysis to determine if any of the soil/sediment exhibits the toxicity characteristic for lead (> 5 mg/l). A 50-foot by 50-foot coordinate grid system will be used to guide the collection of these characterization samples, i.e., composite sample will be collected from each 50-foot grid. The samples will be submitted for analysis of TCLP lead. Additional samples may be collected using the 50-foot grid system for delineation purposes, i.e. one composite sample per 50-foot grid. These samples will be submitted for analysis of total lead and total iron.

- Based on these results, soil/sediment that is determined to exhibit the toxicity characteristic for lead will be treated

in-situ within the footprint of the F-Pond using the appropriate additive and dosage rate required to render the soil/sediment non-hazardous, when generated. Upon the completion of in-situ treatment activities, composite samples will be collected to verify that the treatment criteria were achieved, i.e. <5 mg/l TCLP lead. If the treatment criteria were not achieved, then in-situ treatment will continue until the treatment criteria are achieved and confirmed by laboratory analysis.

- Impacted soils/sediments with concentrations of the constituents of concern that exceed the remediation goals, i.e. 800 mg/kg total lead and 100,000 mg/kg total iron, will be dried or solidified, as needed, to ensure that free liquids are not present in the material for off-site disposal purposes.

- The treated soil/sediment and impacted soil/sediment with concentrations of the constituents of concern that exceed the remediation goals, i.e. 800 mg/kg total lead and 100,000 mg/kg total iron, will then be excavated to the appropriate depth, as guided by the use of an x-ray fluorescence (XRF) field screening unit. The excavated soil/sediment will be temporarily stockpiled within the limits of the F-Pond for consolidation purposes prior to off-site disposal as non-hazardous waste at a Subtitle D disposal facility.

- When XRF field screening indicates that excavation is complete, post-excavation confirmation samples will be collected to confirm that the remediation goals have been achieved. The post excavation confirmation samples will consist of composite samples collected from the bottom and sidewalls of the excavation using the established 50-foot by 50-foot coordinate grid system, i.e., composite sample per grid bottom and one composite sample per grid sidewall, for laboratory analysis of total lead and iron. If the laboratory results indicate that the remediation goals have not been achieved, then excavation of the impacted soil/sediment will continue until the remediation goals have been achieved and confirmed by laboratory analysis.

- The excavated portions of the F-Pond will be restored pursuant to the requirements of the Nationwide Permit 38 approved by the U.S. ACOE.

- A deed restriction will be required under this alternative to limit future use of the unit to commercial/industrial

purposes. Refer to Figure 3 for a summary of the remedial activities associated with this corrective measure alternative for the F-Pond.

Alternative No. 3: Solidification/On-site Consolidation and Containment.

Alternative No. 3 consists of 1) dewatering of the F-Pond; 2) identification of characteristically hazardous soils/sediments, if generated; 3) in-situ treatment of soils/sediments that may exhibit the toxicity characteristic for lead, if generated, to less than 5 parts per million (ppm); 4) solidification of the soil/sediments for stability purposes; 5) consolidation of the treated and impacted soils/sediments to one portion of the F-Pond; 6) placement of an engineered cover over the consolidated soils/sediments with concentrations of the constituents of concern that exceed the remediation goals; and 7) deed restriction of the F-Pond to limit future use of the unit to commercial/industrial purposes and to maintain the integrity of the engineered cover. The components of this alternative are further described as follows:

- Surface water present in the F-Pond will be sampled to determine the nature and concentration of the contaminants of concern identified during previous investigations, i.e. lead, iron, manganese, and TCE. Based on these results, the surface water will be transferred directly to the facility's WWTP for treatment, if needed, and discharge under the facility's industrial discharge permit. This discharge will be conducted by KS&W in compliance with the limits established in the NPDES industrial discharge permit.

- Samples will then be collected from the F-Pond soil/sediment for laboratory analysis to determine if the soil/sediment exhibits the toxicity characteristic for lead (> 5 mg/l TCLP). A 50-foot by 50-foot coordinate grid system will be used to guide the collection of these characterization samples, i.e. one composite sample will be collected from each 50-foot grid. The samples will be submitted for analysis of TCLP lead. Additional samples may be collected using the 50-foot grid system for delineation purposes, i.e. one composite sample per 50-foot grid. These samples will be submitted for analysis of total lead and total iron.

- Based on these results, soil/sediment that is determined to exhibit the toxicity characteristic for lead, if generated,

will be treated in-situ within the footprint of the F-Pond using the appropriate additive and dosage rate required to achieve a concentration of less than 5 ppm TCLP lead. Upon the completion of in-situ treatment activities, composite samples will be collected to verify that the treatment criteria were achieved, i.e. <5 mg/l TCLP lead. If the treatment criteria were not achieved, then in-situ treatment will continue until the treatment criteria are achieved and confirmed by laboratory analysis.

- Impacted soils/sediments with concentrations of the constituents of concern that exceed the remediation goals, i.e. 800 mg/kg total lead and 100,000 total iron, will be solidified to ensure that the material can support the weight of the engineered cover.

- The treated and solidified soils/sediments will be excavated to the appropriate depth required to achieve the remediation goals, as guided by the use of an XRF unit, for consolidation in one portion of the F-Pond.

- When the XRF field screening indicates that excavation is complete, post-excavation confirmation samples will be collected to confirm that the remediation goals have been achieved. The post excavation confirmation samples will consist of composite samples collected from the bottom and sidewalls of the excavated portions of the F-Pond using the established 50-foot by 50-foot coordinate grid system, i.e. one composite sample per grid bottom and one composite sample per grid sidewall, for laboratory analysis of total lead and iron. If the laboratory results indicate that the remediation goals have not been achieved, then excavation of the impacted soil/sediment will continue until the remediation goals have been achieved and confirmed by laboratory analysis.

- The excavated portions of the F-Pond will be restored pursuant to the requirements of the Nationwide Permit 38 approved by the U.S. ACOE.

- A groundwater monitoring program will be developed to confirm that there is no migration of the contaminants of concern.

- A deed restriction will be required under this alternative to limit future use of the unit to commercial/industrial purposes and to maintain the integrity of the engineered cover.

North Ditch Staging Area

Keystone has considered the following options for the remediation of lead-impacted soils at the North Ditch Staging Area:

Alternative No. 4: No Action

Alternative No. 4 consists of no action. Under this alternative, no remedial action or institutional controls will be implemented.

Alternative No. 5: CAMU Treatment/Off-site Disposal

Alternative No. 5 consists of the: 1) identification of characteristically hazardous soils; 2) excavation and treatment of characteristically hazardous soils, if present, within a designated storage/treatment corrective action management unit (CAMU) to render the soil non-hazardous and meet the applicable land disposal restrictions (LDR); 3) excavation of impacted soils to achieve the remediation goals; 4) off-site disposal of the excavated and treated soils as non-hazardous waste at a Subtitle D disposal facility; and 5) deed restriction on the North Ditch Staging Area to limit future use of the unit to commercial/industrial purposes. The components of this alternative are further described as follows:

- Samples will be collected for laboratory analysis from the locations in the North Ditch Staging Area where samples were previously collected in December 2002 to determine if the soil exhibits the toxicity characteristic for lead (>5 mg/l TCLP).

- Based on these results, soil that is determined to exhibit the toxicity characteristic for lead will be excavated and temporarily stockpiled within the storage/treatment CAMU. (The storage/treatment CAMU will be located within the limits of the North Ditch Staging Area). The temporary soil stockpiles will then be treated using the appropriate additive and dosage rate required to render the soil non-hazardous and meet the applicable LDRs. Verification samples will be collected from the treated soil stockpiles at the frequency required to meet the receiving landfill's requirements to verify that the alternative LDR treatment standards for contaminated soil, pursuant to 40 CFR § 268.49, have been met. If the treatment criteria were not achieved, then in-situ treatment will continue until the

treatment criteria are achieved and confirmed by laboratory analysis.

- Impacted soils with lead concentrations that exceed the remediation goal of 800 mg/kg will be excavated to the appropriate depth (estimated to be approximately 2 feet below ground surface), as guided by the use of an XRF field screening unit. The excavated soil will be temporarily stockpiled within the limits of the North Ditch Staging Area pending off-site disposal as non-hazardous waste at a Subtitle D disposal facility.

- When XRF field screening indicates that excavation is complete, post-excavation confirmation samples will be collected to confirm that the remediation goals have been achieved. Post-excavation confirmation samples will be collected from the excavation bottom and sidewalls using a 50-foot by 50-foot coordinate grid system, i.e. one composite sample per grid bottom and one composite sample per grid sidewall, for laboratory analysis of total lead. If the laboratory results indicate that the remediation goals have not been achieved, then excavation of the impacted soil will continue until the remediation goals have been achieved and confirmed by laboratory analysis.

- Clean fill from an on-site source located to the south of the Temporary Container Storage Area will be transferred to the North Ditch Staging Area for use as backfill. Samples will be collected from the fill material at a frequency of one sample per source and will be submitted for analysis of total RCRA 8 metals and total petroleum hydrocarbons (TPH) to determine if the fill is usable. The total RCRA 8 metals results will be compared to the Illinois TACO Tier I Soil Remediation Objectives for Industrial/Commercial Properties and the TPH concentration will not exceed 100 ppm. If the TPH concentration exceeds 100 ppm, then the sample will be analyzed for semi-volatile organic compounds (SVOC) and the results will be compared to the Illinois TACO Tier I Soil Remediation Objectives for Industrial/Commercial Properties. If the results are less than the applicable TACO Tier I Soil Remediation Objectives for Industrial/Commercial Properties, then the backfill source will be deemed clean for use. The fill will be placed in the excavation in specified lifts and compacted to original grade.

- A deed restriction will be required under this alternative to limit future use of the unit to

commercial/industrial purposes.

Alternative No. 6: In-situ Treatment/On-site Containment

Alternative No. 6 consists of the: 1) identification of characteristically hazardous soil; 2) in-situ treatment of soils that exhibit the toxicity characteristic for lead, if generated, to less than 5 ppm; 3) placement of an engineered cover over all soils with concentrations of the constituent of concern that exceed the remediation goals; and 4) deed restriction on the North Ditch Staging Area to limit future use of the unit to commercial/industrial purposes and to maintain the integrity of the engineered cover. The components of this alternative are further described as follows:

- Samples will be collected for laboratory analysis from the locations in the North Ditch Staging Area where samples were previously collected in December 2002 to determine if the soil exhibits the toxicity characteristic for lead (>5 mg/l TCLP).

- Based on these results, soil that is determined to exhibit the toxicity characteristic for lead will be treated in-situ within the footprint of the North Ditch Staging Area using the appropriate additive and dosage rate required to achieve a concentration of less than 5 ppm TCLP lead. Verification samples will be collected from the treated soil to ensure that the a concentration of less than 5 ppm TCLP lead was achieved. If the treatment criteria were not achieved, then in-situ treatment will continue until the treatment criteria are achieved and confirmed by laboratory analysis.

- The impacted area will be re-graded to achieve the desired slopes prior to placement of the engineered cover. An engineered cover consisting of 6 inches of asphalt will be placed on the impacted area.

- A deed restriction will be required under this alternative to limit future use of the unit to commercial/industrial purposes and to maintain the integrity of the engineered cover.

Cost Analysis

The estimated costs for the corrective measures alternatives presents estimates for capital costs and the annual operation

and maintenance costs. The present worth values for the various alternatives are as follows:

F-Pond

Alternative No.1, No action. **$0**

Alternative No.2, In-situ Treatment/Offsite Disposal.
$300,000 to $350,000

Alternative No.3, Solidification/Onsite Containment.
$200,000 to $250,000

North Ditch Staging Area

Alternative No.4, No action. **$0**

Alternative No.5, CAMU Treatment/Offsite Disposal.
$300,000 to $350,000

Alternative No.6, In-situ Treatment/Onsite containment.
$200,000 to $250,000

O&M/year. **$1,000 to $1,000**

EVALUATION OF THE PROPOSED REMEDY AND ALTERNATIVES

The selected remedies for cleaning up contaminated media at the KS&W facility as discussed above are Alternatives No.2 and No.5. The selection of Alternatives No.2 and No.5 is based on the following reasons: (a) the facility will not pose acute risks to humans and other ecological receptors when the remedy is complete; (b) the preponderance of wastes at the units in question will be treated and disposed offsite as non hazardous wastes; (c) the Peoria community and the neighboring communities do not use the groundwater as a drinking water source since drinking water supplies are already provided by the local governments in the area; (d) it is consistent with U.S. EPA's policy to encourage facility owners to redevelop and reuse land that has been impacted; (e) the alternatives do not require frequent or complex operation and maintenance; and (f) placement of deed restriction on the property deed will restrict the future use of the property to commercial and industrial.

The following discussion profiles the performance of the proposed remedy against technical, human health, environmental and institutional criteria.

1. **Technical.** Performance of the proposed remedy is evaluated through effectiveness and useful life. The remedy should be able to perform its intended function of containing, collecting and treating contaminated ground water over the required period of time. Reliability of the proposed remedy is evaluated through operation and maintenance (O&M) requirements and demonstrated reliability. The remedy should require infrequent O&M activities and have a minimal risk of failure. The viability of the proposed remedy is evaluated through its constructability and the time required for implementation and improvements. The remedy should be easily installed and provide beneficial results in a short period of time. Safety of the proposed remedy is evaluated for workers, nearby communities and the local environment. The chances for fire, explosion and exposure to hazardous constituents are considered.

   Technical criteria were compared on a relative basis between each of the corrective measure alternatives and their components. Alternatives No.2 and No.5 were found to meet all the technical criteria goals of performance, reliability, implementability and safety.

2. **Human Health.** The selected remedy should mitigate the short and long term potential for exposure to hazardous constituents and protect human health during and after its implementation. Compliance with existing U.S. EPA criteria, standards and guidelines is essential.

   The overall protection of human health is addressed most effectively at the KS&W facility by Alternatives No.2 and No.5. The toxicity and volume of the lead and iron-impacted soil/sediment will be reduced within the F-Pond due to the off-site disposal of these materials. The mobility of the lead in the characteristically hazardous soil/sediment, if present, will be reduced by treatment. The treatment process will reduce the leachability of the lead through chemical fixation/stabilization to concentrations below the toxicity characteristic concentrations. The offsite treatment component of the other alternatives would increase the risk of adverse offsite incidents.

Compliance with applicable ground water protection standards would be addressed by monitoring the existing onsite wells and installation of offsite monitoring wells located immediately outside of the facility boundary.

3. **Environmental.** The selected remedy should provide the greatest improvement to the environment over the shortest period of time. Adverse effects from the implementation of the remedy should be minimized. The overall protection of the environment is addressed most effectively at KS&W by Alternatives No.2 and No.5. Characteristically hazardous soils/sediments will be treated, as needed, and treated and impacted soils/sediments with lead and iron concentrations which exceed the remediation goals will be removed from the facility, eliminating the potential for future exposure to on-site workers or environmental receptors.

4. **Cost Estimate:** While not considered to be an evaluation criteria, costs were determined for each alternative. Costs could be considered when deciding between two or more corrective measure alternatives that were equally acceptable when evaluated for technical, human health, environmental and institutional criteria. Alternatives No.2 and No.5 will achieve the corrective action objectives in a cost effective manner and will provide for continued productive use of the property.

In summary, Alternatives No.2 and No.5 provide the best balance of tradeoffs among the alternatives with respect to the evaluation criteria. The proposed alternatives are protective of human health and the environment and will effectively control the source of contaminants into the ground water so as to reduce or eliminate further contamination. All applicable standards regarding ground water protection and onsite/offsite waste management would be addressed under this proposal and complied with during the corrective measures implementation process.

PUBLIC PARTICIPATION

U.S. EPA solicits input from the community on the cleanup methods proposed for each of the corrective measure alternatives. The public is also invited to provide comment on alternatives not addressed in this Statement of Basis (SB). U.S. EPA has set a public comment period from **August 1, 2005 to September 16, 2005** to encourage public participation in the selection process.

The Administrative Record for the KS&W facility is available at the following location:

Peoria Public Library
107 NE Monroe Street
Peoria, Illinois 61602
(309) 497-2000

Alfa Park Public Library
3257 South Airport Road
Bartonville, Illinois 61607
(309) 697-3822

U.S. EPA, Region 5
Waste Management Division Records Center
77 West Jackson Boulevard, 7th Floor
Chicago, Illinois 60604
(312) 353-5821
Hours: Mon-Fri, 8:30 a.m. - 5:00 p.m.

After consideration of the comments received, U.S. EPA will select the remedy and document the selection in the Response to Comments (RTC). In addition, comments will be summarized and responses provided in the RTC. The RTC will be drafted at the conclusion of the public comment period and incorporated into the Administrative Record.

Written comments should be sent to:

Jonathan Adenuga
U.S. Environmental Protection Agency
77 West Jackson Boulevard, DRE-9J
Chicago, Illinois 60604

STATEMENT OF BASIS

for

Keystone Steel and Wire Company
EPA ID NO. ILD 000 714 881
Peoria, Illinois

Keystone Steel and Wire Company
Peoria, Illinois

INTRODUCTION

This Statement of Basis (SB) for Keystone Steel and Wire Company (KS&W) explains the proposed remedy for the collection, treatment and removal of hazardous waste from an onsite pond (F-Pond) and the North Ditch Staging Area at the facility in Peoria, Illinois. In addition, the SB includes summaries of all corrective measure alternatives analyzed by KS&W. U.S. EPA will select a final remedy for the facility only after the public comment period has ended and the information provided by the public during this period has been reviewed and substantive comments considered.

The U.S. EPA is issuing this SB as part of its public participation responsibilities under the Resource Conservation and Recovery Act (RCRA). The document summarizes information that can be found in greater detail in the February 2001 Current Conditions Report and the January 2002 Environmental Indicators (EI) Determination Report and other pertinent documents contained in the Administrative Record for this facility. U.S. EPA encourages the public to review these documents in order to gain a more comprehensive understanding of the facility and the RCRA activities that have been conducted. The public can be involved in the remedy selection process by reviewing the documents contained in the Administrative Record.

U.S. EPA may modify the proposed remedy or select another remedy based on new information or public comments. Therefore, the public is encouraged to review and comment on **all** alternatives.

PROPOSED REMEDY

The U.S. EPA is proposing the following remedy to address all contamination at the **F-Pond:**

1) Dewatering of the F-Pond; 2) identification of characteristically hazardous soils/sediments; 3) in-situ treatment of characteristically hazardous soils/sediments, if present, to render the soils/sediments non-hazardous, when generated; 4) excavation of the treated and impacted soils/sediments to achieve the remediation goals; 5) off-site disposal of the excavated soils/sediments as non-hazardous waste at a Subtitle D disposal facility; 6) deed restriction on the F-Pond to limit future use of the unit to commercial/industrial

purposes; and 7) implementation of a groundwater monitoring system to demonstrate no impact to the underlying groundwater.

The U.S. EPA is proposing the following remedy to address all contamination at the **North Ditch Staging Area:**

1) Identification of characteristically hazardous soils; 2) excavation and treatment of characteristically hazardous soils, if present, within a designated storage/treatment Corrective Action Management Unit (CAMU) to render the soil non-hazardous and meet the applicable land disposal restrictions (LDR); 3) excavation of impacted soils to achieve the remediation goals; 4) off-site disposal of the excavated and treated soils as non-hazardous waste at a Subtitle D disposal facility; 5) deed restriction on the North Ditch Staging Area to limit future use of the unit to commercial/industrial purposes; and 6) implementation of a groundwater monitoring system to demonstrate no impact to the underlying groundwater. The components of this alternative are further described below.

The U.S. EPA considers corrective action for groundwater to be complete when all releases to groundwater, including releases from Solid Waste Management Units (SWMUs), have been remediated. Groundwater cleanup objectives include three components: groundwater cleanup levels, point of compliance, and remediation time frames. Point of compliance for corrective action should be throughout the area where groundwater is contaminated above cleanup levels, or, when waste is left in place, at and beyond the boundary of the waste. U.S. EPA refers to this point of compliance as the "throughout-the plume/unit boundary" point of compliance. Therefore, for the current groundwater contamination, U.S. EPA proposes that KS&W continue to operate the ongoing pump and treat system to meet the concentration levels set by the IEPA in the Groundwater management zone (GMZ). For the F-Pond and the North Ditch Staging Area, U.S. EPA is proposing that KS&W also implement a one-time groundwater sampling and analysis program to demonstrate that there are no impacts to groundwater from the F-Pond and North Ditch Staging Area. All hazardous constituents reported in these two units will be analyzed in all groundwater samples collected from the monitoring wells to be installed at these units. A more detailed discussion of the proposed remedy is included below.

The U.S. EPA is also proposing that KS&W must demonstrate that adequate funds will be available to complete the construction as well as the operation and maintenance of the proposed remedy. KS&W must provide this financial assurance within 90 days after U.S. EPA selects the remedy and issues its *Final Decision and*

Response to Comments. Any of the following financial mechanisms may be used to make this demonstration: financial trusts, surety bonds, letters of credit, insurance, or qualification as a self-insurer by means of a financial test. KS&W may request that the amount of the financial assurance be reduced substantially after successfully completing the construction, and again from time to time during the operation and maintenance phase of the remedy.

FACILITY BACKGROUND

The site is located at 7000 South Adams Street, Peoria, Illinois. The facility is just east of U.S. Route 24, south the intersection of Routes 24 and 474, and about one mile west of the Illinois River. The facility manufactures iron and steel including semi-finished and finished wire products. The facility occupies about 1,410 acres and has operated since around 1900.

Soil and groundwater in several areas at the facility are contaminated at levels above appropriately protective risk-based standards. The risk based standards used for this determination are the U.S. EPA Region 9 Preliminary Remediation Goals (PRGs) or the Illinois risk-based remediation objectives. Most of these contaminated areas at the facility are units undergoing closure in compliance with a 1993 Consent Order issued by the Illinois Environmental Protection Agency (IEPA) to KS&W. Corrective action and closure of a majority of these areas has been done under the supervision of the IEPA. These areas include the following: a) South Ditch, b) South Borrow Area Waste Pile, c) Lower South Ditch, d) Soil Stained Area, e) North Ditch, f) Surface Drainage Ditch Area, g), h) Mid Mill Ditch, and i) North and South Dredged Pile.

In 1994, a (GMZ) was approved by IEPA under the 1993 Consent Order to control and begin remediation of a plume of contaminated groundwater that extends under most of the Mid Mill portion of the facility. The groundwater plume is controlled and remediated via a groundwater pump and treat system consisting of four purge wells and an air stripper tower. The plume contains 1,4-dioxane, 1,1-dichcloroethane, 1,1-dichloroethene, trans-1,2-DCE, cis-1,2-DCE, terachloroethene, trichloroethylene, trichloroethene and vinyl chloride. Total volatiles concentrations throughout the GMZ have already been reduced to below one part per million and the action of the pump and treat system continues to reduce the area and extent of the plume.

In December 19, 2000, the U.S. EPA issued an Administrative Order on Consent (AOC) to KS&W compelling KS&W to identify the nature

and extent of any releases of hazardous waste or hazardous constituents from five Solid Waste Management Units (SWMUs) at the facility: a) the Sheen Pond; b) the F-pond; c) the Tail Track Landfill; d) the pond east of the Tail Track Landfill; and e) the Oil Skimming Basin. KS&W was required to submit an Environmental Indicators (EI) report demonstrating that KS&W has contained all current human exposure to contamination and has stabilized the migration of contaminated groundwater at or from the facility including the SWMUs mentioned above. The AOC also required that KS&W submit to U.S. EPA for review final corrective measure proposals for the five SWMUs by January 2003. The AOC requires KS&W to complete all final correctives measures within a reasonable period to protect human health and the environment.

CORRECTIVE MEASURES IMPLEMENTED

KS&W has continued making progress towards the closure of several units since the end of 2000. KS&W has demonstrated clean closure for the following units at the facility: a) the North Ditch; b) the Mid Mill Ditch; c) the Surface Drainage Ditch; and d) the North and South Dredged Pile. To address the remaining areas subject to closure under the IEPA Order, KS&W continues to investigate and submit closure and remedial proposals to the IEPA. Remedial action plans for the South Ditch, South Borrow Area and the Lower South Ditch were approved by the IEPA in November 2002. The current deadline for completing the remedial actions at these three Units is December 31, 2005.

Based on on the January 29, 2002 EI Assessment Report, KS&W has also continued the operation of the groundwater purge wells and the air stripper tower to control and remediate the plume of contaminated groundwater at the facility. Operations have resulted in a significant reduction in the GMZ area and significant reductions in overall containment concentrations throughout the plume. Chlorinated compounds such as TCE, 1,1,1,-TCA, vinyl chloride, 1,2-DCE, trans-1,2 have been detected in deep aquifer at the facility in varying concentrations. For example, 1,1,1-trichloroethane concentrations range from 25 ppb to 205 ppb, well above the recommended PRG of 5.4 ppb; trichloroethylene concentrations range from 65 ppb to 530 ppb, well above the PRG of 1.6 ppb. As of November of 2001, monitoring events indicate that the pump and treat method of remediation currently ongoing at the site has reduced the concentrations of total volatile concentrations throughout the plume to below 1 ppm. The plume circumference has been drastically reduced and contained within the facility boundary. No offsite migration of contaminated groundwater has ever been reported.

Also based on the EI Assessment Report, KS&W investigated four other areas originally not identified in the December 2000 AOC: the North Ditch Staging Area, the East Sludge Pond and the East West Pond; the Slag Processing Area; and the North and South Sludge Lagoons. Excluding the North Ditch Staging Area, the U.S. EPA concluded from these additional investigations that no further actions are warranted in the North and South Sludge Lagoons and the East Sludge Pond and the East West Pond.

SUMMARY OF FACILITY RISKS

Based on the results of the 2001 surface water samples collected from the F-Pond, iron and manganese were detected at 29 ppb and 47 ppb above the federal drinking water standard of 15ppb. TCE was also detected in one sample at 2 ppb. In the sediment samples collected from F-Pond, lead and iron were detected at concentrations above the industrial PRGs. Iron concentrations in the sediments range from 21,000 mg/kg to 140,000 mg/kg and lead concentrations range from 210mg/kg to 3,100 mg/kg. The results of the 1996 and 2002 sampling events at the North Ditch Staging Area also confirmed the presence of elevated lead in soils. Based on TCLP results, concentrations of lead in soils range from non-detect to 22 mg/kg and total concentrations for lead range from 380 mg/kg to 12,000 mg/kg. The levels of lead and iron contamination are above appropriately protective risk-based standards. The risk based standards used for this determination are the U.S. EPA Region 9 Preliminary Remediation Goals (PRGs) or the Illinois risk-based remediation Objectives.

The goals of the selected remedy are to eliminate significant exposures that pose threats to human health and the environment, to clean up contaminated soils to levels consistent with current land use, to restore ground water to its maximum beneficial use, and to eliminate risks to human health by meeting the applicable health-based ground water protection standards. The proposed Remedy selection was based on the assumption that future use of the site will be industrial/commercial, consistent with the current property use. Each of the constituents detected at the site was retained as Potential Constituents of Concern (PCOCs) in groundwater, sediments and surface water. Since the F-Pond may be designated as a wetland, it is assumed that the excavated portion of the F-Pond will not be backfilled with clean fill, but may be restored in accordance with the requirements of Nationwide Permit 38 as approved by the U.S. Army Corps of Engineers.

The site-specific corrective action objectives utilize an exposure prevention approach which either allows removal of waste

materials, activity restrictions or construction of engineered controls to prevent contact.

SUMMARY OF CORRECTIVE MEASURE ALTERNATIVES

The reasonable alternatives for addressing contamination at the KS&W facility are presented below.

Soil and Structures:
Access Restrictions
Deed Restrictions
In-situ Treatment/Off-site Disposal

Groundwater:
Groundwater Pump and Treat System
Alternate Water Supply
Groundwater Monitoring

All of the above alternatives were evaluated during the Corrective Measures Study. Based on the evaluation of these alternatives, the Corrective Measures Alternatives described below were proposed by KS&W for addressing contamination at the facility.

KS&W'S PROPOSED CORRECTIVE MEASURES ALTERNATIVES FOR ADDRESSING CONTAMINATION AT THE FACILITY

Several corrective measures alternatives were considered for the F-Pond and the North Ditch Staging Area during the development of this corrective measures study. The alternatives were developed based on RCRA's threshold screening criteria. Those criteria are as follows:

- Protecting human health and the environment;
- Attaining the applicable media cleanup standards; and
- Controlling the sources of the releases.

The alternatives considered for the F-Pond and North Ditch Staging Area that meet these criteria are described in the following sections. These proposed corrective measures are intended to address risks to human health and the environment under commercial/industrial land use scenarios.

F-Pond

Keystone has considered the following options for the remediation of lead and iron-impacted soils/sediments at the F-Pond.

Alternative No. 1: No Action

Alternative No. 1 consists of no action. Under this alternative, no remedial action or institutional controls will be implemented.

Alternative No. 2: In-situ Treatment/Off-site Disposal

Alternative No. 2 consists of the: 1) dewatering of the F-Pond; 2) identification of characteristically hazardous soils/sediments; 3) in-situ treatment of characteristically hazardous soils/sediments, if present, to render the soils/sediments non-hazardous, when generated; 4) excavation of the treated and impacted soils/sediments to achieve the remediation goals; 5) off-site disposal of the excavated soils/sediments as non-hazardous waste at a Subtitle D disposal facility; and 6) deed restriction of the F-Pond to limit future use of the unit to commercial/industrial purposes. The components of this alternative are further described as follows:

- Surface water present in the F-Pond will be sampled to determine the nature and concentration of the contaminants of concern identified during previous investigations, i.e. lead, iron, manganese, and trichloroethylene (TCE). Based on these results, the surface water will be transferred directly to the facility's wastewater treatment plant (WWTP) for treatment, if needed, and discharge under the facility's industrial discharge permit. This discharge will be conducted by KS&W in compliance with the limits established in the NPDES industrial discharge permit.

- Samples will be collected from the F-Pond soil/sediment for laboratory analysis to determine if any of the soil/sediment exhibits the toxicity characteristic for lead (> 5 mg/l). A 50-foot by 50-foot coordinate grid system will be used to guide the collection of these characterization samples, i.e., composite sample will be collected from each 50-foot grid. The samples will be submitted for analysis of TCLP lead. Additional samples may be collected using the 50-foot grid system for delineation purposes, i.e. one composite sample per 50-foot grid. These samples will be submitted for analysis of total lead and total iron.

- Based on these results, soil/sediment that is determined to exhibit the toxicity characteristic for lead will be treated

in-situ within the footprint of the F-Pond using the appropriate additive and dosage rate required to render the soil/sediment non-hazardous, when generated. Upon the completion of in-situ treatment activities, composite samples will be collected to verify that the treatment criteria were achieved, i.e. <5 mg/l TCLP lead. If the treatment criteria were not achieved, then in-situ treatment will continue until the treatment criteria are achieved and confirmed by laboratory analysis.

- Impacted soils/sediments with concentrations of the constituents of concern that exceed the remediation goals, i.e. 800 mg/kg total lead and 100,000 mg/kg total iron, will be dried or solidified, as needed, to ensure that free liquids are not present in the material for off-site disposal purposes.

- The treated soil/sediment and impacted soil/sediment with concentrations of the constituents of concern that exceed the remediation goals, i.e. 800 mg/kg total lead and 100,000 mg/kg total iron, will then be excavated to the appropriate depth, as guided by the use of an x-ray fluorescence (XRF) field screening unit. The excavated soil/sediment will be temporarily stockpiled within the limits of the F-Pond for consolidation purposes prior to off-site disposal as non-hazardous waste at a Subtitle D disposal facility.

- When XRF field screening indicates that excavation is complete, post-excavation confirmation samples will be collected to confirm that the remediation goals have been achieved. The post excavation confirmation samples will consist of composite samples collected from the bottom and sidewalls of the excavation using the established 50-foot by 50-foot coordinate grid system, i.e., composite sample per grid bottom and one composite sample per grid sidewall, for laboratory analysis of total lead and iron. If the laboratory results indicate that the remediation goals have not been achieved, then excavation of the impacted soil/sediment will continue until the remediation goals have been achieved and confirmed by laboratory analysis.

- The excavated portions of the F-Pond will be restored pursuant to the requirements of the Nationwide Permit 38 approved by the U.S. ACOE.

- A deed restriction will be required under this alternative to limit future use of the unit to commercial/industrial

purposes. Refer to Figure 3 for a summary of the remedial activities associated with this corrective measure alternative for the F-Pond.

Alternative No. 3: Solidification/On-site Consolidation and Containment.

Alternative No. 3 consists of 1) dewatering of the F-Pond; 2) identification of characteristically hazardous soils/sediments, if generated; 3) in-situ treatment of soils/sediments that may exhibit the toxicity characteristic for lead, if generated, to less than 5 parts per million (ppm); 4) solidification of the soil/sediments for stability purposes; 5) consolidation of the treated and impacted soils/sediments to one portion of the F-Pond; 6) placement of an engineered cover over the consolidated soils/sediments with concentrations of the constituents of concern that exceed the remediation goals; and 7) deed restriction of the F-Pond to limit future use of the unit to commercial/industrial purposes and to maintain the integrity of the engineered cover. The components of this alternative are further described as follows:

- Surface water present in the F-Pond will be sampled to determine the nature and concentration of the contaminants of concern identified during previous investigations, i.e. lead, iron, manganese, and TCE. Based on these results, the surface water will be transferred directly to the facility's WWTP for treatment, if needed, and discharge under the facility's industrial discharge permit. This discharge will be conducted by KS&W in compliance with the limits established in the NPDES industrial discharge permit.

- Samples will then be collected from the F-Pond soil/sediment for laboratory analysis to determine if the soil/sediment exhibits the toxicity characteristic for lead (> 5 mg/l TCLP). A 50-foot by 50-foot coordinate grid system will be used to guide the collection of these characterization samples, i.e. one composite sample will be collected from each 50-foot grid. The samples will be submitted for analysis of TCLP lead. Additional samples may be collected using the 50-foot grid system for delineation purposes, i.e. one composite sample per 50-foot grid. These samples will be submitted for analysis of total lead and total iron.

- Based on these results, soil/sediment that is determined to exhibit the toxicity characteristic for lead, if generated,

will be treated in-situ within the footprint of the F-Pond using the appropriate additive and dosage rate required to achieve a concentration of less than 5 ppm TCLP lead. Upon the completion of in-situ treatment activities, composite samples will be collected to verify that the treatment criteria were achieved, i.e. <5 mg/l TCLP lead. If the treatment criteria were not achieved, then in-situ treatment will continue until the treatment criteria are achieved and confirmed by laboratory analysis.

- Impacted soils/sediments with concentrations of the constituents of concern that exceed the remediation goals, i.e. 800 mg/kg total lead and 100,000 total iron, will be solidified to ensure that the material can support the weight of the engineered cover.

- The treated and solidified soils/sediments will be excavated to the appropriate depth required to achieve the remediation goals, as guided by the use of an XRF unit, for consolidation in one portion of the F-Pond.

- When the XRF field screening indicates that excavation is complete, post-excavation confirmation samples will be collected to confirm that the remediation goals have been achieved. The post excavation confirmation samples will consist of composite samples collected from the bottom and sidewalls of the excavated portions of the F-Pond using the established 50-foot by 50-foot coordinate grid system, i.e. one composite sample per grid bottom and one composite sample per grid sidewall, for laboratory analysis of total lead and iron. If the laboratory results indicate that the remediation goals have not been achieved, then excavation of the impacted soil/sediment will continue until the remediation goals have been achieved and confirmed by laboratory analysis.

- The excavated portions of the F-Pond will be restored pursuant to the requirements of the Nationwide Permit 38 approved by the U.S. ACOE.

- A groundwater monitoring program will be developed to confirm that there is no migration of the contaminants of concern.

- A deed restriction will be required under this alternative to limit future use of the unit to commercial/industrial purposes and to maintain the integrity of the engineered cover.

North Ditch Staging Area

Keystone has considered the following options for the remediation of lead-impacted soils at the North Ditch Staging Area:

Alternative No. 4: No Action

Alternative No. 4 consists of no action. Under this alternative, no remedial action or institutional controls will be implemented.

Alternative No. 5: CAMU Treatment/Off-site Disposal

Alternative No. 5 consists of the: 1) identification of characteristically hazardous soils; 2) excavation and treatment of characteristically hazardous soils, if present, within a designated storage/treatment corrective action management unit (CAMU) to render the soil non-hazardous and meet the applicable land disposal restrictions (LDR); 3) excavation of impacted soils to achieve the remediation goals; 4) off-site disposal of the excavated and treated soils as non-hazardous waste at a Subtitle D disposal facility; and 5) deed restriction on the North Ditch Staging Area to limit future use of the unit to commercial/industrial purposes. The components of this alternative are further described as follows:

- Samples will be collected for laboratory analysis from the locations in the North Ditch Staging Area where samples were previously collected in December 2002 to determine if the soil exhibits the toxicity characteristic for lead (>5 mg/l TCLP).

- Based on these results, soil that is determined to exhibit the toxicity characteristic for lead will be excavated and temporarily stockpiled within the storage/treatment CAMU. (The storage/treatment CAMU will be located within the limits of the North Ditch Staging Area). The temporary soil stockpiles will then be treated using the appropriate additive and dosage rate required to render the soil non-hazardous and meet the applicable LDRs. Verification samples will be collected from the treated soil stockpiles at the frequency required to meet the receiving landfill's requirements to verify that the alternative LDR treatment standards for contaminated soil, pursuant to 40 CFR § 268.49, have been met. If the treatment criteria were not achieved, then in-situ treatment will continue until the

treatment criteria are achieved and confirmed by laboratory analysis.

- Impacted soils with lead concentrations that exceed the remediation goal of 800 mg/kg will be excavated to the appropriate depth (estimated to be approximately 2 feet below ground surface), as guided by the use of an XRF field screening unit. The excavated soil will be temporarily stockpiled within the limits of the North Ditch Staging Area pending off-site disposal as non-hazardous waste at a Subtitle D disposal facility.

- When XRF field screening indicates that excavation is complete, post-excavation confirmation samples will be collected to confirm that the remediation goals have been achieved. Post-excavation confirmation samples will be collected from the excavation bottom and sidewalls using a 50-foot by 50-foot coordinate grid system, i.e. one composite sample per grid bottom and one composite sample per grid sidewall, for laboratory analysis of total lead. If the laboratory results indicate that the remediation goals have not been achieved, then excavation of the impacted soil will continue until the remediation goals have been achieved and confirmed by laboratory analysis.

- Clean fill from an on-site source located to the south of the Temporary Container Storage Area will be transferred to the North Ditch Staging Area for use as backfill. Samples will be collected from the fill material at a frequency of one sample per source and will be submitted for analysis of total RCRA 8 metals and total petroleum hydrocarbons (TPH) to determine if the fill is usable. The total RCRA 8 metals results will be compared to the Illinois TACO Tier I Soil Remediation Objectives for Industrial/Commercial Properties and the TPH concentration will not exceed 100 ppm. If the TPH concentration exceeds 100 ppm, then the sample will be analyzed for semi-volatile organic compounds (SVOC) and the results will be compared to the Illinois TACO Tier I Soil Remediation Objectives for Industrial/Commercial Properties. If the results are less than the applicable TACO Tier I Soil Remediation Objectives for Industrial/Commercial Properties, then the backfill source will be deemed clean for use. The fill will be placed in the excavation in specified lifts and compacted to original grade.

- A deed restriction will be required under this alternative to limit future use of the unit to

commercial/industrial purposes.

Alternative No. 6: In-situ Treatment/On-site Containment

Alternative No. 6 consists of the: 1) identification of characteristically hazardous soil; 2) in-situ treatment of soils that exhibit the toxicity characteristic for lead, if generated, to less than 5 ppm; 3) placement of an engineered cover over all soils with concentrations of the constituent of concern that exceed the remediation goals; and 4) deed restriction on the North Ditch Staging Area to limit future use of the unit to commercial/industrial purposes and to maintain the integrity of the engineered cover. The components of this alternative are further described as follows:

- Samples will be collected for laboratory analysis from the locations in the North Ditch Staging Area where samples were previously collected in December 2002 to determine if the soil exhibits the toxicity characteristic for lead (>5 mg/l TCLP).

- Based on these results, soil that is determined to exhibit the toxicity characteristic for lead will be treated in-situ within the footprint of the North Ditch Staging Area using the appropriate additive and dosage rate required to achieve a concentration of less than 5 ppm TCLP lead. Verification samples will be collected from the treated soil to ensure that the a concentration of less than 5 ppm TCLP lead was achieved. If the treatment criteria were not achieved, then in-situ treatment will continue until the treatment criteria are achieved and confirmed by laboratory analysis.

- The impacted area will be re-graded to achieve the desired slopes prior to placement of the engineered cover. An engineered cover consisting of 6 inches of asphalt will be placed on the impacted area.

- A deed restriction will be required under this alternative to limit future use of the unit to commercial/industrial purposes and to maintain the integrity of the engineered cover.

Cost Analysis

The estimated costs for the corrective measures alternatives presents estimates for capital costs and the annual operation

and maintenance costs. The present worth values for the various alternatives are as follows:

F-Pond

Alternative No.1, No action. **$0**

Alternative No.2, In-situ Treatment/Offsite Disposal.
$300,000 to $350,000

Alternative No.3, Solidification/Onsite Containment.
$200,000 to $250,000

North Ditch Staging Area

Alternative No.4, No action. **$0**

Alternative No.5, CAMU Treatment/Offsite Disposal.
$300,000 to $350,000

Alternative No.6, In-situ Treatment/Onsite containment.
$200,000 to $250,000

O&M/year. **$1,000 to $1,000**

EVALUATION OF THE PROPOSED REMEDY AND ALTERNATIVES

The selected remedies for cleaning up contaminated media at the KS&W facility as discussed above are Alternatives No.2 and No.5. The selection of Alternatives No.2 and No.5 is based on the following reasons: (a) the facility will not pose acute risks to humans and other ecological receptors when the remedy is complete; (b) the preponderance of wastes at the units in question will be treated and disposed offsite as non hazardous wastes; (c) the Peoria community and the neighboring communities do not use the groundwater as a drinking water source since drinking water supplies are already provided by the local governments in the area; (d) it is consistent with U.S. EPA's policy to encourage facility owners to redevelop and reuse land that has been impacted; (e) the alternatives do not require frequent or complex operation and maintenance; and (f) placement of deed restriction on the property deed will restrict the future use of the property to commercial and industrial.

The following discussion profiles the performance of the proposed remedy against technical, human health, environmental and institutional criteria.

1. **Technical.** Performance of the proposed remedy is evaluated through effectiveness and useful life. The remedy should be able to perform its intended function of containing, collecting and treating contaminated ground water over the required period of time. Reliability of the proposed remedy is evaluated through operation and maintenance (O&M) requirements and demonstrated reliability. The remedy should require infrequent O&M activities and have a minimal risk of failure. The viability of the proposed remedy is evaluated through its constructability and the time required for implementation and improvements. The remedy should be easily installed and provide beneficial results in a short period of time. Safety of the proposed remedy is evaluated for workers, nearby communities and the local environment. The chances for fire, explosion and exposure to hazardous constituents are considered.

   Technical criteria were compared on a relative basis between each of the corrective measure alternatives and their components. Alternatives No.2 and No.5 were found to meet all the technical criteria goals of performance, reliability, implementability and safety.

2. **Human Health.** The selected remedy should mitigate the short and long term potential for exposure to hazardous constituents and protect human health during and after its implementation. Compliance with existing U.S. EPA criteria, standards and guidelines is essential.

   The overall protection of human health is addressed most effectively at the KS&W facility by Alternatives No.2 and No.5. The toxicity and volume of the lead and iron-impacted soil/sediment will be reduced within the F-Pond due to the off-site disposal of these materials. The mobility of the lead in the characteristically hazardous soil/sediment, if present, will be reduced by treatment. The treatment process will reduce the leachability of the lead through chemical fixation/stabilization to concentrations below the toxicity characteristic concentrations. The offsite treatment component of the other alternatives would increase the risk of adverse offsite incidents.

Compliance with applicable ground water protection standards would be addressed by monitoring the existing onsite wells and installation of offsite monitoring wells located immediately outside of the facility boundary.

3. **Environmental.** The selected remedy should provide the greatest improvement to the environment over the shortest period of time. Adverse effects from the implementation of the remedy should be minimized. The overall protection of the environment is addressed most effectively at KS&W by Alternatives No.2 and No.5. Characteristically hazardous soils/sediments will be treated, as needed, and treated and impacted soils/sediments with lead and iron concentrations which exceed the remediation goals will be removed from the facility, eliminating the potential for future exposure to on-site workers or environmental receptors.

4. **Cost Estimate:** While not considered to be an evaluation criteria, costs were determined for each alternative. Costs could be considered when deciding between two or more corrective measure alternatives that were equally acceptable when evaluated for technical, human health, environmental and institutional criteria. Alternatives No.2 and No.5 will achieve the corrective action objectives in a cost effective manner and will provide for continued productive use of the property.

In summary, Alternatives No.2 and No.5 provide the best balance of tradeoffs among the alternatives with respect to the evaluation criteria. The proposed alternatives are protective of human health and the environment and will effectively control the source of contaminants into the ground water so as to reduce or eliminate further contamination. All applicable standards regarding ground water protection and onsite/offsite waste management would be addressed under this proposal and complied with during the corrective measures implementation process.

PUBLIC PARTICIPATION

U.S. EPA solicits input from the community on the cleanup methods proposed for each of the corrective measure alternatives. The public is also invited to provide comment on alternatives not addressed in this Statement of Basis (SB). U.S. EPA has set a public comment period from **August 1, 2005 to September 16, 2005** to encourage public participation in the selection process.

The Administrative Record for the KS&W facility is available at the following location:

Peoria Public Library
107 NE Monroe Street
Peoria, Illinois 61602
(309) 497-2000

Alpha Park Public Library
3527 South Airport Road
Bartonville, Illinois 61607
(309) 697-3822

U.S. EPA, Region 5
Waste Management Division Records Center
77 West Jackson Boulevard, 7th Floor
Chicago, Illinois 60604
(312) 353-5821
Hours: Mon-Fri, 8:30 a.m. - 5:00 p.m.

After consideration of the comments received, U.S. EPA will select the remedy and document the selection in the Response to Comments (RTC). In addition, comments will be summarized and responses provided in the RTC. The RTC will be drafted at the conclusion of the public comment period and incorporated into the Administrative Record.

Written comments should be sent to:

Jonathan Adenuga
U.S. Environmental Protection Agency
77 West Jackson Boulevard, DRE-9J
Chicago, Illinois 60604

Waste, Pesticides and Toxics Division

Type of Document: Statement of Basis

Name of Document (FacilityName & Location): KEYSTONE STEEL & WIRE

Document # (EPA ID# ILD 000 714 881 **Originator/Phone:** 886-7954

NOTE: Originator and first level supervisor are responsible for assuring that documents are in plain language. All other reviewers should consider plain language in their reviews. See the plain language checklist on the reverse side of this sheet.

Date	Name	Secretary/Chief Initials
6/7/05	Author Jonathan Adenuga	J.O.A
6-7-05	ECAB Section Chief George Hamper	
6/8/05	Corrective Action Manager Gerald Phillips	
6/15/05	Asst. Reg. Counsel Robert Guenther	
	Chief, ORC Section	
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REMARKS/COMMENTS

Plain Language Checklist

Write in the active voice. When you use the active voice, the subject of the sentence acts: "EPA issued the permit to X." When you use the passive voice, the subject of the sentence is acted upon: "The permit was issued to X." If you can ask "By whom?" or "By what?" after the verb, the verb is in the passive voice. A passive verb has a form of the verb "to be" (am, is, are, was, were, be, being, been) plus a main verb usually ending in "en" or "ed."

Use action verbs. Use base verbs instead of nouns derived from verbs.

Don't Say **Say**

Don't Say	**Say**	is applicable to	applies
		to	
make payment	pay	give consideration to	consider
take action	act		

Use personal pronouns to represent the reader and to refer to EPA. For example, "The United States Environmental Protection Agency is issuing an order to X (you). We are requiring you..."

Write short sentences to aid comprehension. Put one main thought in most sentences. Divide a long sentence into two or three short sentences. Remove all unnecessary words. If there are several conditions or subordinate provisions, make a list.

Omit surplus words and redundancies. Question the need for ~~each and~~ every word.

Don't Say	**Say**	
Redundancies	for the period of	for
true and correct	in order to	to
cease and desist	in the event that	if
order and direct		

Place words carefully to reduce ambiguity. Keep subjects and objects close to verbs. Put modifying phrases and words such as "only" and "always" next to the word they modify.
She *only* said that he hired her. She said that *only* he hired her. She said that he hired *only* her.

Be consistent. Don't use different words to refer to the same thing (car, vehicle, automobile).

Limit your use of abbreviations, acronyms, and capital letters. Use abbreviations and acronyms to refer only to terms that are central to the document. Do not abbreviate terms that you use only a few times. Use capital letters to begin sentences and for proper names and for headings. You should reconsider all other uses.

Visit the government's plain language wet site at www.plainlanguage.gov.

Public Participation Check-Off Form

Facility Name: Keystone Steel & Wire - Peoria, Illinois
Facility ID#: ILD 000 714 881
WMB/ECAB Staff: Jonathan Adenuga

Public Comment Period: August 1 - September 16, 2005
Hearing Date: None Scheduled

Check once Received	Document Title	Initials/Date Filed
✔	1) Tearsheet from newspaper	8/8/05
✔	2) Affidavit from radio station	8/4/05 & 9/29/05
✔	3) Certificate of mailing w/list of interested parties	7/29/05
N/A	4) Transcript from Hearing	---N/A—
✔	5) Verification of Receipt by Library and Facility	8/8/05
✔	6) Processed paperwork from Budgeting & Acquisitions (have this at my desk–it might be more than you need)	
✔	7) Copy of all Correspondence (interested party letter, letter to library, letter to facility)	7/29/05
	8) Original request for IMS assistance	
✔	9) Public Notice & Public Service Announcement	7/11/05
✔	10) Voucher & PR requesting funding (have this at my desk–might be more than you need)	
N/A	11) 3.5 Diskette (if you provided one)	N/A
N/A	12) List of "return to senders"	N/A
✔	13) Misc. (Statement of Basis, Permit Conditions, Fact Sheet)	7/ /05
N/A	14) Other	N/A

tjr 10/99

DRE-8J

Glen Savage, Manager
Field Operations Section
Bureau of Land Pollution Control
Illinois Environmental
Protection Agency
2200 Churchill Road
Springfield, Illinois 62706

Re: Citizen Complaint
Keystone Steel and
Wire Recyclers
ILD 000 714 881

Dear Mr. Savage:

The United States Environmental Protection Agency, Region 5, Enforcement and Compliance Assurance Branch received an anonymous citizen complaint.

The citizen has alleged illegal disposal and lead problems at Keystone Steel and Wire Recyclers, located at 7000 S. West Adams, Peoria, Illinois 61641. This letter serves as a follow-up to the complaint and a request for Illinois Environmental Protection Agency to check into this matter. Please inform us as to the applicability of the Resource Conservation and Recovery Act to this situation. If an inspection is conducted, please send a copy of the inspection report to Barbara Russell, IL/IN Section, Enforcement and Compliance Assurance Branch, DRE-8J, 77 West Jackson Blvd., Chicago, Illinois 60604.

If you have any questions, please contact Barbara Russell, of my staff, at (312) 353-7922.

Sincerely yours,

Lorna M. Jereza, Chief
Illinois/Indiana Section

cc: W. Radlinski, IEPA
W. Ingersoll, IEPA

bcc: Branch Copy
Reading Copy

DRE-8J/BR:be/3-7911/5/30/96/g:ILIN/Filename:citikeys

ENFORCEMENT AND COMPLIANCE ASSURANCE BRANCH

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